

## Message Text

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ACTION EUR-12

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TO SECSTATE WASHDC PRIORITY 2609

UNCLAS MOSCOW 20283

FOR EUR/SOV

DEPT PASS NAS

EO 11652: NA  
TAGS: TGEN UR US  
SUBJECT: INTER-ACADEMY EXCHANGE: BIOLOGICAL RESEARCH AT SHEMYAKIN  
INSTITUTE: EXTENSION REQUEST

REF: STATE 312891

1. ROBERT M. HOFFMAN PROVIDED EMBASSY DECEMBER 30 WITH STATEMENT IN SUPPORT OF HIS REQUEST FOR THREE-MONTH EXTENSION OF STAY IN USSR, AS REQUESTED BY NAS PER REFTEL. STATEMENT IS TRANSMITTED IN FULL BELOW. DEPARTMENT IS REQUESTED TO PROVIDE NAS WITH TEXT OF STATEMENT ASAP. HOFFMAN WILL APPRECIATE EARLIEST POSSIBLE NOTIFICATION OF NAS DECISION OF HIS REQUEST.

2. TEXT OF STATEMENT BY ROBERT M. HOFFMAN FOLLOWS. BEGIN QUOTE. WE HAVE ENTRAPPED IN LIPOSOMES LARGE AMOUNTS OF DNA, SUCH THAT DNA IS DNASE RESISTANT. PRELIMINARY ELECTRON MICROGRAPHS INDICATE THAT THESE ARE TRUE LIPOSOMES. DATA ON MOLECULAR WEIGHT OF ENTRAPPED DNA AVAILABLE SHORTLY. RADIOACTIVE DNA CONTAINING LIPOSOMES WILL BE

INTRODUCED TO CELLS IN CULTURE AND AMOUNT OF DNA TAKEN UP BY CELLS MEASURED AND COMPARED TO AMOUNT OF UNENTRAPPED DNA TAKEN UP. FATE  
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OF DNA WILL BE FOLLOWED.

3. DNA FROM NORMAL CELLS WILL BE INTRODUCED VIA LIPOSOMES INTO MUTANT AND MALIGNANT TISSUE CULTURE CELLS. SELECTIVE GROWTH MEDIA WILL BE USED SUCH THAT ONLY REVERTED CELLS CAN GROW. SOME OF CELL LINES HAVE SPONTANEOUS REVERSION RATE OF CLOSE TO ZERO.

4. SPECIFIC DNA'S MAY ALSO BE ENTRAPPED INTO LIPOSOMES AND INTRODUCED TO MAMMALIAN CELLS. FOR EXAMPLE YEAST RIBOSOMAL DNA IS AVAILABLE AND MAY BE ENTRAPPED IN LIPOSOMES IN FREE FORM OR INTEGRATED INTO PLASMID. THE ENTRAPPED DNA CAN THEN BE INTRODUCED INTO CELLS AND ITS FUNCTION MEASURED BY SPECIFIC HYBRIDIZATION OF ANY TRANSCRIBED YEAST RIBOSOMAL RNA.

5. RNA'S MAY ALSO BE ENTRAPPED IN LIPOSOMES AND INTRODUCED INTO MUTANT CELLS. REVERSE TRANSCRIPTASE MAY ALSO BE ENTRAPPED ALONG WITH RNA'S TO SEE IF THIS INCREASED REVERSION RATE. REVERSE TRANSCRIPTASE AVAILABLE HERE. IF ENTRAPPED RNA'S ALONE CAN INCREASE REVERSION RATE, THIS MAY INDICATE FUNCTION OF ENDOGENOUS REVERSE TRANSCRIPTASE.

6. EFFECT ON CELLS OF LIPOSOMALLY INTRODUCED REVERSE TRANSCRIPTASE ALONE MAY BE TESTED.

7. I AGREE TO CONTINUE TO ADHERE TO GUIDELINES ESTABLISHED AT ASILOMAR CONFERENCE AND HEW COMMITTEE ON RECOMBINANT DNA MOLECULES.

8. PROFESSOR OVCHINNIKOV ASKS THAT IF NAS AGREES TO EXTEND MY STAY, THAT REQUEST BE SENT TO HIM. HE AGREES IN PRINCIPLE TO EXTEND MY STAY, DEPENDING ON REPLY OF NAS, /S/ ROBERT HOFFMAN. END QUOTE.  
MATLOCK

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## Message Attributes

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**Capture Date:** 01 JAN 1994  
**Channel Indicators:** n/a  
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**TAGS:** TGEN, UR, US, (HOFFMAN, ROBERT M)  
**To:** STATE  
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